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1983

PARLIAMENT OF TASMANIA

DEPARTMENT OF MAIN ROADS

REPORT FOR YEAR 1981-82

AUSTRALIAN ROAD
RESEARCH BOARD

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DEPARTMENT OF MAIN ROADS

SIXTH ANNUAL REPORT For the year ended 30 June 1982

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DEPARTMENT OF MAIN ROADS

Director of Main Roads — G. E. C. MCKERCHER

Assistant Director — L. J. BAILY

Secretary — K. G. RASMUSSEN

PRINCIPAL OFFICERS — HEAD OFFICE

Principal Engineer, Design — Vacant

Principal Engineer, Construction — D. A. WHARMBY

Division Engineer, Road Design — W. D. COOMBS

Division Engineer, Road Construction — O. A. WILSON

Division Engineer, Bridges — I. A. GAGGIN

Division Engineer, Plant — F. N. LAKIN

Assistant Secretary — R. F. READ

Chief Accountant — F. J. DRAKE

PRINCIPAL OFFICERS — DISTRICTS

District Engineer, South-East, Derwent Park — M. G. LINTON

Executive Officer — G. S. GRIGGS

District Engineer, North-East, Launceston — P. A. MEYER

Executive Officer — R. A. PETERS

District Engineer, North-West, Ulverstone — J. H. DRISCOLL

Executive Officer — C. J. MORGAN

DEPARTMENT OF MAIN ROADS

ANNUAL REPORT FOR 1981-82

FOREWORD

The funds available to the Department for road purposes in 1981-82 were less in real terms than in each of the three preceding financial years. This decline in the funds for roads is shown by the following statement of the amounts received from State sources and Commonwealth Road Grants, expressed in 1982 values.

								<i>\$ Million (1982 Values)</i>			
								1978-79	1979-80	1980-81	1981-82
State Funds	....	....	....	....	....	....	....	29.5	27.5	26.9	26.6
Commonwealth Grants	....	....	....	....	....	....	....	32.8	31.3	31.4	30.2
Total Funds	....	....	....	....	....	....	....	62.3	58.8	58.3	56.8

As indicated in previous reports the decline in funds for roads has made it necessary to continue to defer the construction of needed improvements to many important roads, particularly some rural arterial roads, and adopt a strict order of priority in the allocation of available funds.

Towards the end of 1981-82 there were clear indications that the funds for roads from Commonwealth and State sources in 1982-83, 1983-84 and possibly beyond, will be higher in real terms relative to 1981-82.

These expected increases in road funding will permit the construction of improvements on several important roads to be programmed for completion considerably earlier than had been planned.

A review of current design and construction programs is being undertaken to determine the adjustments in timings of projects which can be made as a consequence of the increased levels of road funding and to assess what additional design and supervisory resources will be required for implementation of the amended programs.

FINANCE

GENERAL

The Department has continued to monitor the rising cost of its operations by the use of a road construction price index.

The Department's index has, over the last twelve years, increased at a greater rate than the Consumer Price Index. This is probably due in part to the fact that a significant component of the Department's index is made up of wage rates.

The Road Price Index rose by 12.8 per cent during 1981-82 while the Consumer Price Index increased by 9.9 per cent. Over the same period the weighted average weekly wage paid to adult males working in the building and construction industry in Tasmania, as reported by the Australian Bureau of Statistics, rose by 11.9 per cent.

The comparison between the index developed by the Department and the Consumer Price Index adjusted to the same base year is set out below —

<i>Date 30 June</i>	<i>D.M.R. Road Index</i>	<i>Consumer Price Index</i>
1970	100.0	100.0
1971	110.8	104.6
1972	122.0	111.3
1973	133.8	119.3
1974	162.4	136.8
1975	199.3	159.3
1976	233.6	183.0
1977	263.5	206.8
1978	283.3	224.0
1979	300.6	243.6
1980	337.6	268.3
1981	374.1	292.1
1982	421.9	321.0

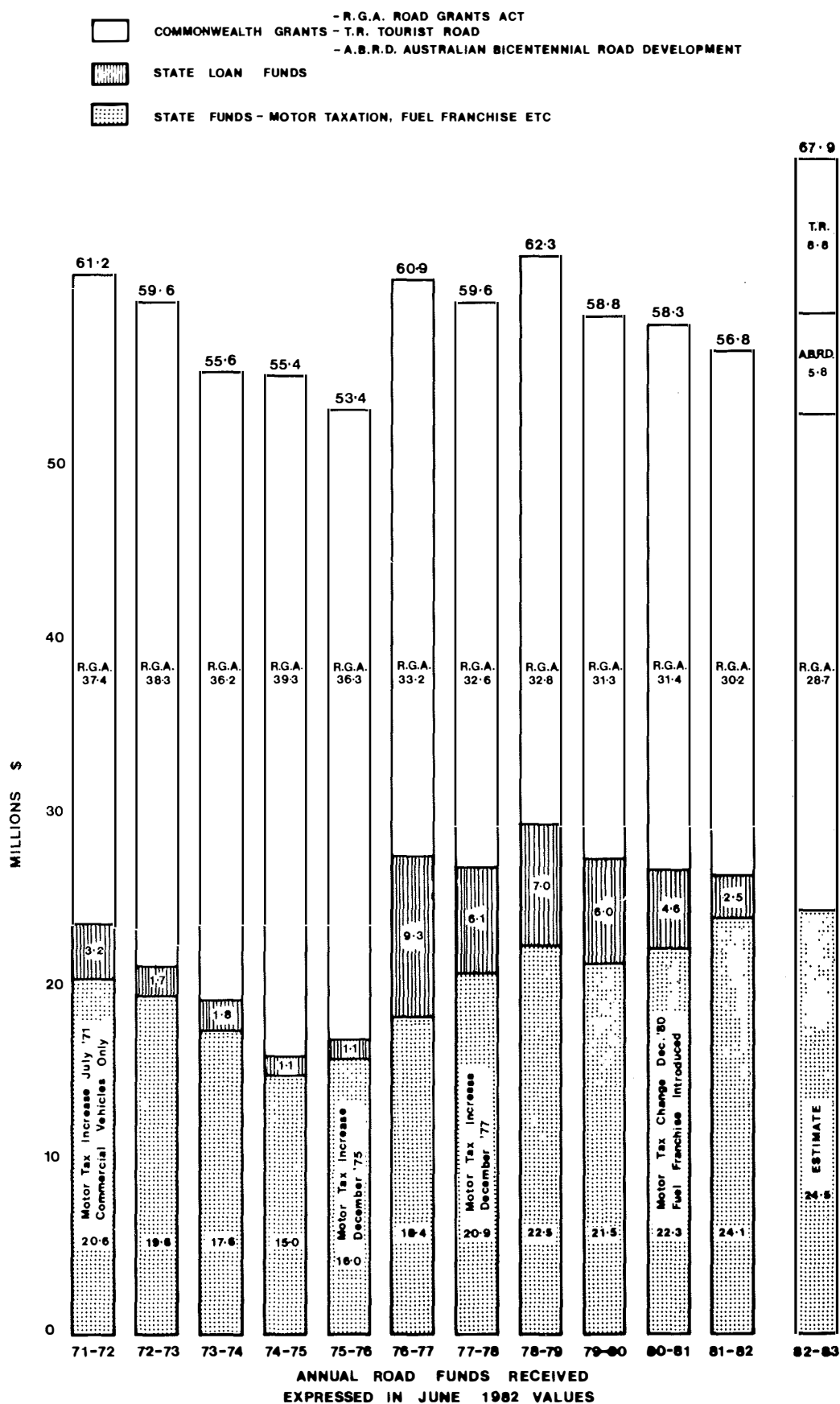
The rate of inflation affecting the operations of the Department of Main Roads for the financial year 1982–83 is currently estimated to be 13 per cent per annum. Commonwealth Grants available to the Department for road purposes were indexed by 7.48 per cent for 1979–80, 11.15 per cent for 1980–81, 9 per cent for 1981–82 and 7.15 per cent for 1982–83.

The bar chart opposite illustrates the funds received by the Department for roadworks. In each case the funds have been adjusted to June 1982 values by using the Department's road price index.

The sensitivity of State funds to rises in motor taxation rates is clearly visible. The increase in State funds during recent years has not been sufficient to make up for the short fall in Commonwealth funds.

During 1982–83 there is expected to be a sharp decline in the usual Commonwealth Road Grants in real terms. However, there will be a once only grant for Tourist Roads and continuing grants until 1988 for the Australian Bicentennial Road Development (A.B.R.D.) program. These latter funds will be financed from Commonwealth petroleum fuel tax collections.

To be eligible for A.B.R.D. funds, Tasmania must maintain its expenditure on roads in real terms each year.



MOTOR TAXATION

Receipts from motor taxation were \$18 746 178 an increase of 5·7 per cent over the preceding year, while public vehicle fees decreased by 76·5 per cent to \$150 154 in 1981–82. Receipts under the provisions of the Petroleum Products Business Franchise Licences Act 1981 provided \$3 900 221 in 1981–82.

MISCELLANEOUS RECEIPTS

Receipts from this source were \$1 275 659, compared with \$1 379 678 in 1980–81 and includes tolls received from the woodchip industry as well as the proceeds from the sale of surplus property.

COMMONWEALTH GRANTS FOR ROADS

Under the Roads Grants Act 1981 the Commonwealth provided financial assistance to the States for roads in the financial year 1981–82. The total grant to Tasmania was \$30 243 000, made up as follows:—

	\$
National Roads — Construction and Maintenance	13 984 000
Arterial Roads — Construction	8 037 000
Local Roads — Construction and Maintenance	8 222 000
TOTAL	\$30 243 000

The 1981 Act discontinued the State Contribution (Quota) System.

Under the Roads Grants Amendment Act 1982 the following allocation of road funds was made in respect of 1982–83 and 1983–84:—

	1982–83	1983–84
	\$	\$
National Roads — Construction and Maintenance	14 988 000	15 887 000
Arterial Roads — Construction	8 605 000	9 121 000
Local Roads — Construction and Maintenance	8 813 000	9 341 000
	\$32 406 000	\$34 349 000

LOAN FUNDS

Loan funds provided to the Department for roads, bridges and other works totalled \$3 817 360, a decrease of 16·9 per cent on the previous year.

SPECIAL COMMONWEALTH FUNDS

Special Commonwealth Funds provided through the Department for the Second Hobart Bridge project amounted to \$16 433 222 in 1981–82 compared with \$6 793 830 in 1980–81.

FUNDS PROVIDED BY OTHER DEPARTMENTS AND AUTHORITIES

Payments received by the Department for works and services carried out for other Departments and Authorities amounted to \$2 963 163 compared with \$2 433 132 in 1980–81. The Department was involved in undertaking major roadworks for the Hydro-Electric Commission on the Pieman River Power Development Scheme, and minor works for the Education, Health Services and Transport Departments as well as the Department of Housing and Construction.

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

As shown in the following statement, the funds obtained during 1981–82 from all sources (including the Special Commonwealth funds for the Second Hobart Bridge project) amounted to \$78 253 291 an increase of 24·6 per cent on 1980–81.

Excluding the funds for the Second Hobart Bridge, the total of funds from all other sources amounted to \$61 820 069 in 1981–82 compared with \$56 006 143 in 1980–81, an increase of only 10·4 per cent, which is less than the rise in the Road Price Index.

SOURCES OF FUNDS

1980–81		1981–82	
\$		\$	\$
	State Highways Trust Fund—		
	(a) State Motor Taxation, Public Vehicle Fees, Fuel Franchise and Miscellaneous		
19 748 359	Receipts	24 072 212	
27 726 000	(b) Commonwealth Grants for Roads	30 243 000	
			54 315 212
4 591 867	Loan Funds		3 817 360
6 793 830	Special Commonwealth Funds		16 433 222
888 142	Consolidated Revenue Fund		724 334
2 433 132	Funds Provided by other Departments and Authorities		2 963 163
618 643	Net Decrease in Funds carried forward		....
\$62 799 973			\$78 253 291

APPLICATION OF FUNDS

1980–81		1981–82	
\$		\$	\$
	State Highways Trust Fund—		
40 499 233	Roadworks	45 927 563	
7 587 174	Bridgeworks	8 105 249	
6 595	Ferries	12 536	
....	Net increase in funds carried forward	269 864	54 315 212
	Loan Funds—		
3 621 689	Roadworks	2 550 000	
658 311	Bridges	....	
124 624	Jetties and Facilities for Fishermen	99 988	
187 243	Launceston Flood Protection	179 443	
....	Bruny Ferry Terminals	987 929	3 817 360
	Special Commonwealth Funds—		
6 793 830	Second Hobart Bridge	16 433 222	16 433 222
	Consolidated Revenue Fund—		
371 198	Departmental Administration	440 155	
149 959	Workers' Compensation (Other Departments)	164 910	
75 000	Repairs to Jetties	74 999	
	Contributions and Grants for Sundry Buildings and Facilities and Miscellaneous		
173 495	Expenses	....	
118 490	Other Miscellaneous Expenses Including Recreation Ground Subsidies	44 270	724 334
2 433 132	Works for Other Departments and Authorities	....	2 963 163
\$62 799 973	TOTAL	....	\$78 253 291

STATE HIGHWAYS TRUST FUND

The State Highways Trust Fund Account is established under the Roads and Jetties Act 1935. The fund is credited with the following moneys:—

- (1) all grants made by the Commonwealth under the Roads Grants Acts;
- (2) all State motor taxation;
- (3) the net amount of registration fees for motor vehicles, licence fees for drivers and renewal and transfer fees;

- (4) public vehicle fees imposed under section 20A of the Traffic Act 1925;
- (5) contributions by Municipal Councils for the maintenance of classified roads;
- (6) receipts from sale of stores (other than plant);
- (7) any moneys provided by Parliament for the purposes of the fund; and
- (8) such other moneys (if any) as the Treasurer may direct.

The fund is debited with the following:—

- (a) expenses incurred in the construction, reconstruction and maintenance of State highways and other classified roads;
- (b) costs incurred in the maintenance of Council roads which the Minister has agreed to subsidise;
- (c) contributions to the Bruny, Flinders and King Island Municipalities of portion of the Motor Tax collected in those Municipalities;
- (d) all expenditure incurred under the provisions of the Roads Grants Act 1981 and the Transport Planning and Research (Financial Assistance) Act 1977;
- (e) costs of stores and materials (other than plant); and
- (f) repair and renewal of bridges on Council roads.

A summarised statement of receipts and payments for the State Highways Trust Fund Account for 1981–82 is set out below, together with the corresponding figures for 1980–81 —

STATE HIGHWAYS TRUST FUND 1981–82

1980–81		<i>Receipts</i>	1981–82
\$			\$
993 327	Balance brought forward	....	374 684
27 726 000	Commonwealth Grants for roads	....	30 243 000
17 728 961	Motor Taxation	....	18 746 178
639 720	Public Vehicle Fees	....	150 154
....	Petroleum Products Business Franchise Licences Fees	....	3 900 221
1 379 678	Miscellaneous Receipts	....	1 275 659
<u>\$48 467 686</u>	TOTAL	....	<u>\$54 689 896</u>
		<i>Payments</i>	
12 886 100	National Roads	....	13 856 012
23 872 210	Arterial Roads	....	29 729 089
10 565 040	Local Roads	....	10 460 248
229 379	M.I.T.E.R.S.	....	....
540 273	Transport Planning and Research	....	....
374 684	Balance carried forward	....	644 547
<u>\$48 467 686</u>	TOTAL	....	<u>\$54 689 896</u>

LOAN FUND EXPENDITURE

The loan funds of \$3 817 360, allocated to the Department for roads and bridges and other works, were applied as follows:—

1980–81		1981–82
\$		\$
4 280 000	Roads and Bridges	2 550 000
311 867	Other Works	1 267 360
<u>\$4 591 867</u>	TOTAL	<u>\$3 817 360</u>

A schedule of expenditure items and amounts is shown in Annexure A. It should be noted that the loan fund amounts for the road and bridge items listed in the schedule were in most cases supplemented by funds from the State Highways Trust Fund.

FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES

Under the provisions of the Roads Grants Act 1981 and the Roads and Jetties Act 1935 the Department made direct grants to local government authorities based on a formula approach for construction and/or maintenance of roads controlled by Councils. The direct grants to Councils totalled \$6 847 635, an increase of 9.9 per cent over the amount of the direct grants provided in 1980-81.

In addition to the direct grants, the Department also provided indirect financial assistance to local government authorities. Under the provisions of the Roads and Jetties Act, the Department financed the repair and renewal of bridges on Council roads and carried out these bridgeworks. The Department maintained those Council roads which have been declared as subsidised roads and provided funds to the National Parks and Wildlife Service for work on Council roads. The indirect financial assistance to Councils totalled \$2 209 385, an increase of 19.9 per cent over the preceding year.

The total of direct grants and indirect financial assistance to Councils was \$9 057 020, an increase of 12.2 per cent over 1980-81. The amounts of direct grants and indirect financial assistance to Councils for the various categories of roads and works are shown in Annexure B.

PLANNING AND DESIGN

PROJECT PLANNING

Planning proceeded during the year for a number of projects which will be included in future design and construction programs. These projects included —

BELLERIVE BY-PASS

A working group comprising officers of the Clarence Council, the Department of the Environment and the Department of Main Roads is carrying out an environmental impact study. It is anticipated that documentation for the recommended scheme and the environmental impact study will be completed before December 1982.

BASS HIGHWAY

Prospect By-Pass

A Highway Planning Report is being prepared for submission to the Commonwealth Department of Transport and Construction to have the scheme approved.

Deloraine By-Pass

The access arrangements at the western end of the by-pass have been reviewed and the Mole Creek Interchange lay-out was amended and has been approved by the Commonwealth Department of Transport and Construction.

Latrobe By-Pass

A supplementary Highway Planning Report was submitted to the Commonwealth Department of Transport and Construction and a revised scheme has been approved.

Don to Ulverstone

An 'Overview Report' has been submitted to the Commonwealth Department of Transport and Construction. There are a number of outstanding matters still to be resolved.

Boat Harbour to Rocky Cape

An assessment into the benefits and cost effectiveness of various combinations of overtaking lanes has been carried out with the assistance of the Australian Road Research Board.

EAST TAMAR OUTLET

Several different routes are under investigation for extending the East Tamar Outlet from the Alanvale Connector to Barnards Creek.

HOBART SOUTHERN OUTLET — EXTENSION TO MACQUARIE STREET

A scheme for extending the Southern Outlet through to Macquarie Street has been produced and when finalised will be put on public display.

DAVEY STREET EXTENSION TO TASMAN HIGHWAY

A number of alternative alignments have been investigated to provide a new three lane road connecting the Tasman Highway directly into Davey Street near Hunter Street. The initial objective of the planning is to define the necessary corridor so that the land can be reserved as redevelopment takes place in the Sullivans Cove area.

ROAD DESIGN**BOWEN BRIDGE — WESTERN ROAD APPROACHES**

Design plans have been completed for the upgrading of Goodwood Road to four lanes between Howard Road and the Brooker Highway.

BASS HIGHWAY — BURNIE STAGE B

Work has progressed from the preliminary into the detailed design phase, with the main emphasis being on the Wilmot Street overpass and associated roadworks and the North Terrace reconstruction. A highway planning report for the total project was completed and submitted to the Commonwealth Department of Transport and Construction.

LAUNCESTON SOUTHERN OUTLET**Strathroy Bridge**

Commonwealth Government approval to have the standard of the road upgraded to a 4 lane divided highway to the Launceston Airport turn-off is being sought and, if approval is given a re-design of the highway will be required.

Westbury Road to Glen Dhu Interchange

Design is nearing completion and includes a new link road and interchange located between Melbourne and Shamrock Streets.

Glen Dhu Interchange to Frankland Street

Preliminary design has been completed to the stage where all affected properties have been determined and the owners notified.

MIDLAND HIGHWAY — BRIDGEWATER BY-PASS

Design plans have been completed for the highway to by-pass the Bridgewater town centre. As part of the project the Boyer Secondary Road will be extended across the Midland Highway to junction with the Bridgewater By-Pass.

Features of the design include extensive earth mounds to alleviate traffic noise levels in adjacent residential areas and a system of foot and cycle paths connecting to a bridge over the by-pass in the vicinity of Green Street.

TASMAN HIGHWAY — SCOTTSDALE TO RINGAROOMA TURN-OFF

Design of the difficult Billycock Hill section of the Highway was undertaken during the year.

ARTHUR HIGHWAY — PORT ARTHUR BY-PASS

The design of the Port Arthur By-Pass was completed during the year.

EAST DERWENT HIGHWAY — BOWEN BRIDGE TO SHONES CORNER

The design to allow improvements to be made to this highway in accordance with decisions made by the Joint Committee on Second Hobart Bridge was completed.

WARATAH HIGHWAY — CLIFF SECTION

This section of road presented many engineering difficulties and several designs were carried out before an acceptable solution was obtained.

LAKE HIGHWAY**Great Lake**

Some design work in collaboration with the Hydro-Electric Commission's design staff was undertaken in order to relocate sections of the Lake Highway affected by the proposal to raise the level of the Great Lake.

Deloraine

Design plans were completed to raise a short section of the Lake Highway near Calstock to reduce the frequency of closure due to flooding.

BRIDGE DESIGN

The more important designs completed were —

- Mt Pleasant Underpass on the Southern Outlet Road at Launceston.
- Meander River Bridge on the Bass Highway By-Pass of Deloraine.
- Forth River Bridge on the Bass Highway at Leith.
- Inglis River Bridge in Bridge Street, Wynyard.

The more important designs in hand but not completed were —

- Glen Dhu Overpass on the Southern Outlet Road at Launceston.
- Mole Creek Main Road Underpass on the Bass Highway By-Pass of Deloraine.
- Wilmot Street Overpass on the Burnie Highway Development — Stage 'B'.
- Jordan River Bridge in Andrew Street, Brighton.
- Railway Underpass on the Bass Highway By-Pass of Deloraine.
- Extension of Railway Underpass on the Bass Highway at Leith.

ROAD NEEDS

ROAD INVENTORY

The inventory of Classified Roads was updated in July 1981, with the Jericho By-Pass of the Midland Highway being added in February 1982.

The inventory of Municipal Roads was updated for nine municipalities and a resurvey of one municipality was carried out.

BASS HIGHWAY — WYNYARD TO ROCKY CAPE ROAD

A detailed survey was carried out and data collected covered curve safe speeds, location of barrier lines and an assessment of sight distances at 0.10 km intervals.

N.A.A.S.R.A. ROADS STUDY

A draft specification for the survey of Rural and Outer Urban Arterial Roads has been produced.

Consideration has been given to the survey of Local Roads and draft specifications have been prepared.

ROAD GEOMETRY SURVEY

A survey, using an instrumented vehicle developed by the Australian Road Research Board, covered some 3 440 km of the Classified and Subsidised Roads, together with some 245 km of logging roads on behalf of the Transport Department, was carried out. Data on the location, radius and safe speed for curves, gradients and road cross fall while travelling at normal driving speeds was obtained for coding onto magnetic tape to be retrieved via the computer.

TRAFFIC SERVICES

TRAFFIC COUNTING

The vehicular traffic counting program has continued on a Statewide basis and the results of the counts for the period January to December 1981 appear in the 1981 edition of the Department's publication 'Traffic Volumes, Tasmania'.

In addition to the routine traffic counting program, approximately fifty special surveys were undertaken including '12-hour classification' counts, vehicle turning movements at intersections/junctions, radar speed surveys, travel times, pedestrian counts, video recordings, etc.

Increased use is being made of microcomputers in the analysis of the data collected.

ROAD DIRECTION SIGNING

Installation of the new style road direction signing has progressed to the stage where about half of the road network in rural areas, which was programmed for updating, has been completed. Installation of the new signing on the National Highway between Bridgewater and the outskirts of Launceston was completed during the year. The installation of signs on local Council roads was commenced, and the scheme has received general acceptance by Councils. It is felt that once the general public becomes familiar with the new alpha-numeric route numbering principle, coupled with the route numbering appearing on all tourist road maps, road users will appreciate the advantages of the new system.

TOURIST SIGNING

The Department has become heavily committed with the introduction of a new concept of tourist signing throughout the State. A scheme has been developed under the auspices of the Tourist Signs Advisory Council which is administered by the Department of Tourism.

The scheme uses white routed legends on brown painted timber boards. Any entrepreneur, who so desires, may arrange to have his business included on a panel of signs, at his cost, provided certain conditions are met.

The Department is assisting in the scheme by providing advice as to the location and erection of signs on classified roads and is offering to make the signs for any entrepreneur at his cost.

VEHICLE PERMITS

Three thousand two hundred and thirty-seven permits were issued for the movement of overweight and/or overdimension vehicles during the year. This compares with 3 705 issued during 1980-81.

MISCELLANEOUS INVESTIGATIONS AND ACTIVITIES

The Department is becoming more involved in subdivision and industrial developments as it affects the operational efficiency and safety of the State highway network. To this end, officers are participating more fully in the examination of draft and outline planning schemes, appearing at Planning Appeals Board and Commissioner for Town and Country Planning hearings, inspection of subdivisions and development proposals, etc. The investigation of hazardous traffic situations continues to be a major activity of the Traffic Section.

RIGHT-OF-WAY CONTROL

Right-of-Way control involved matters affecting the administration, control and protection of State Highways and subsidiary roads. The activities involved the following:—

- (i) The consideration of roadside subdivisional and other developments.
- (ii) Advice to Councils and others as to the required location and conditions for all service installations in State road reservations such as water and sewerage mains, H.E.C. and Telecom cabling, kerb and gutter and footpath construction and associated stormwater pipelines.
- (iii) Arranging the preparation of documentation for proclamations under the Roads and Jetties Act 1935 for existing, new and proposed State Road corridors.
- (iv) Maintaining control of 'limited access' roads including the updating of access arrangements.
- (v) Advising solicitors and others in regard to land and property matters when these affect or could be affected by the existing or future State Roads.
- (vi) Consideration and advice to the Commissioner for Town and Country Planning and Councils in relation to new Planning Schemes or amendments to existing schemes.
- (vii) Obtaining and providing advice for the Lands Department for transactions involving Crown Land throughout the State.

A major function of the State road network is to provide a reasonable, safe and efficient traffic route for travel between the population centres or developed areas.

One of the more important aspects of Right-of-Way control is to ensure that this arterial road system is not unnecessarily degraded by the proliferation of accesses or the intensification of the use of accesses resulting from subdivisional or other developments, especially in locations outside existing or planned development areas.

It is accepted that with definite limitations on funds available for road construction, existing highways must be maintained as viable traffic routes for as long as possible. Statutory access control provides the necessary means of achieving this situation, however, only 360 km of State road are so protected.

It is of interest that some 320 new subdivisional proposals with access to State roads were forwarded to the Department over the last year for consideration and advice. This represents an increase of some 15 per cent over the previous financial year.

LAUNCESTON FLOOD PROTECTION SCHEME

The Department continued to provide engineering liaison and a check on the expenditure of State funds provided for capital works and the maintenance of the flood protection system being carried out by the Launceston City Council in accordance with the terms of the agreement.

Approximately \$156 000 was expended on actual works during 1981-82 and this amount combined with a carry over from 1980-81 brought the total expenditure for 1981-82 to \$179 443. The main works undertaken were the reconstruction of three drainage outfalls through the Kings Wharf levee, this work being necessary because of damage to the existing outfalls caused by settlement. Other work included the topping up of levee embankments to design height and the progressive construction of a sprinkler system to the Esplanade levee.

MARINE BOARD WORKS

PORT OF GRASSY, KING ISLAND

This port is managed by the King Island Marine Board under lease from the State in accordance with the terms of the King Island Port Facilities Agreement Act 1971 — administered by the Treasury.

The Department of Main Roads undertakes engineering oversight of the Port liaising as necessary with the Treasury and the King Island Marine Board.

HYDRAULICS

Hydraulic survey was undertaken on a total length of approximately 45 km of road (including 12 km approximately of urban highway) prior to design for new work or reconstruction including sections of the Arthur, Bass, Lyell, and Huon Highways and the Fenton Main Road.

Detailed hydraulic investigation and drainage design was carried out on sections or junctions of major highways as follows:—

The new Launceston Urban Arterial Road System, the Burnie Expressway (part of Stage B), the East Derwent Highway and the new Bowen Bridge approaches.

Approximately one hundred and forty separate hydraulic investigations (both major and minor) were made for bridges, culverts, and road drainage. Included were works on the majority of highways and main roads as well as on secondary and Council roads; also included were major investigations for the following bridges:—

Jordan River Bridge at Willowbrook, Longford By-Pass, Great Forester Bridge, St Pauls River Bridge on Royal George Road near Avoca (Milford Bridge) and Henry Street Bridge over the North Esk at Launceston, and Orielson Rivulet Bridge on the Penna-Sorell Road.

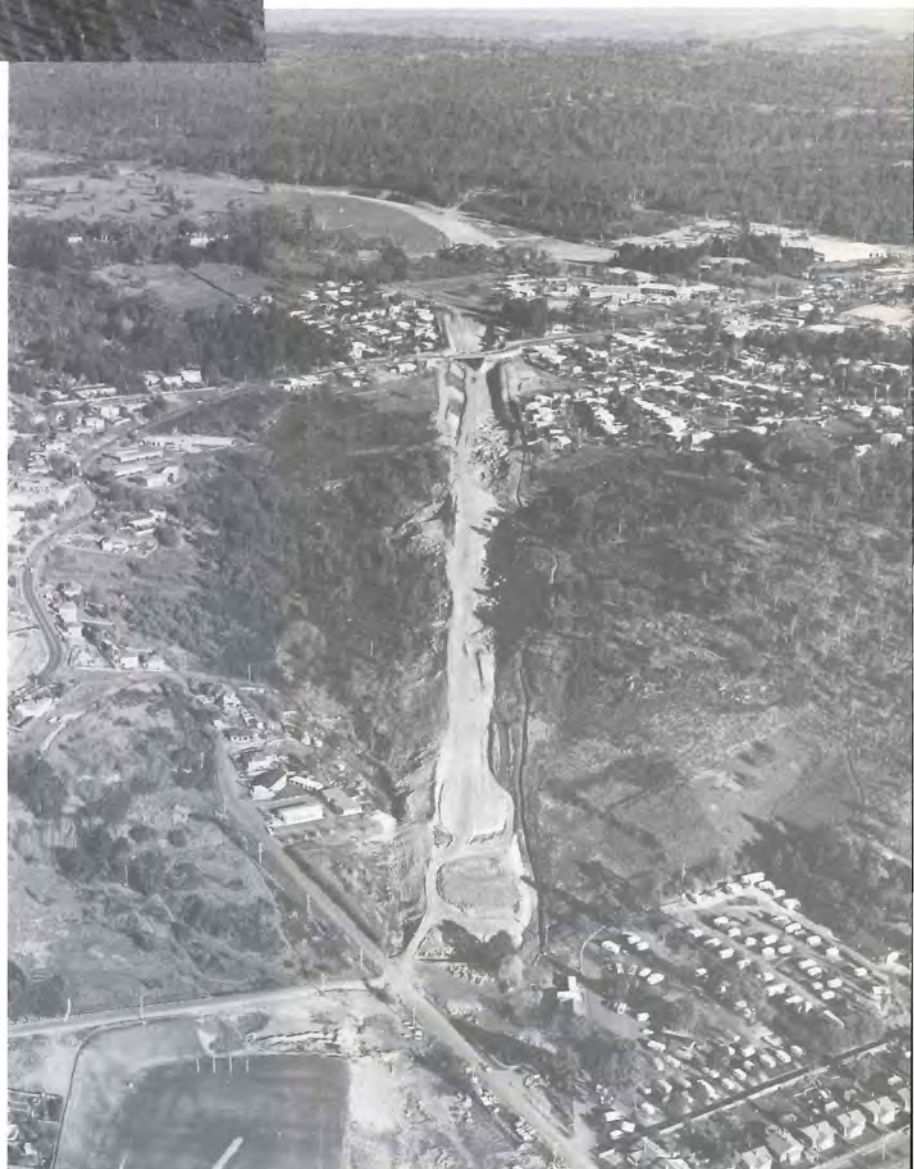
General hydraulic investigation and design were undertaken on approximately 30 different subjects including subdivision drainage onto roads, flooding problems, road drainage, nuisance investigation, erosion control, irrigation, etc.

RESEARCH AND STANDARDS

Some revisions were undertaken to the Manual of Road Drainage Practice. This book was compiled in 1980-81 of some 74 pages of text and diagrams providing comprehensive and detailed information for the design and construction of the Department's road drainage systems. It is now a standard work of reference for the Department.



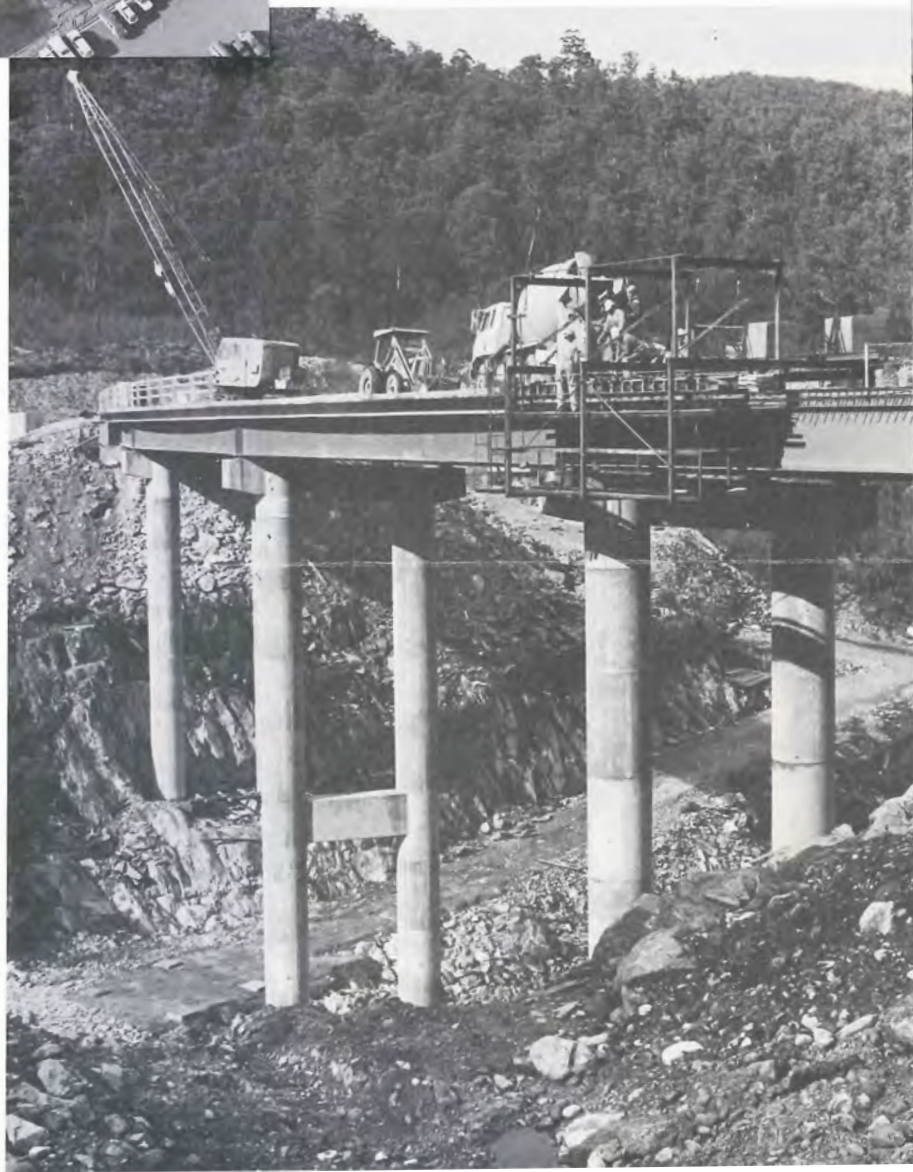
Bowen Bridge from the Eastern Shore, showing approach roads and construction works, with the nearby Bailey Bridge.



Launceston Southern Outlet Road looking south beyond Westbury Road Overpass.



*Launceston Southern Outlet Road.
Westbury Road Overpass during construction.*

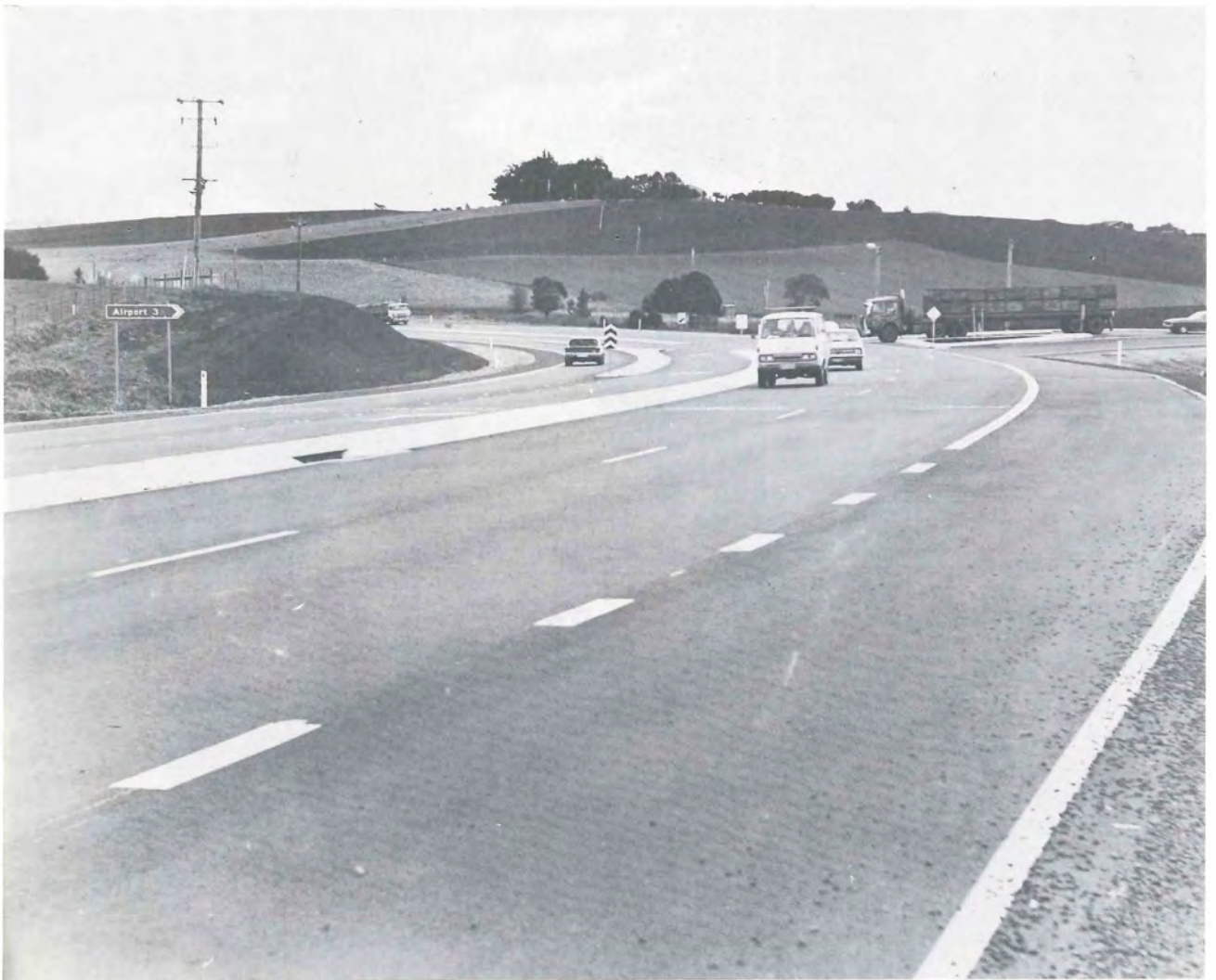


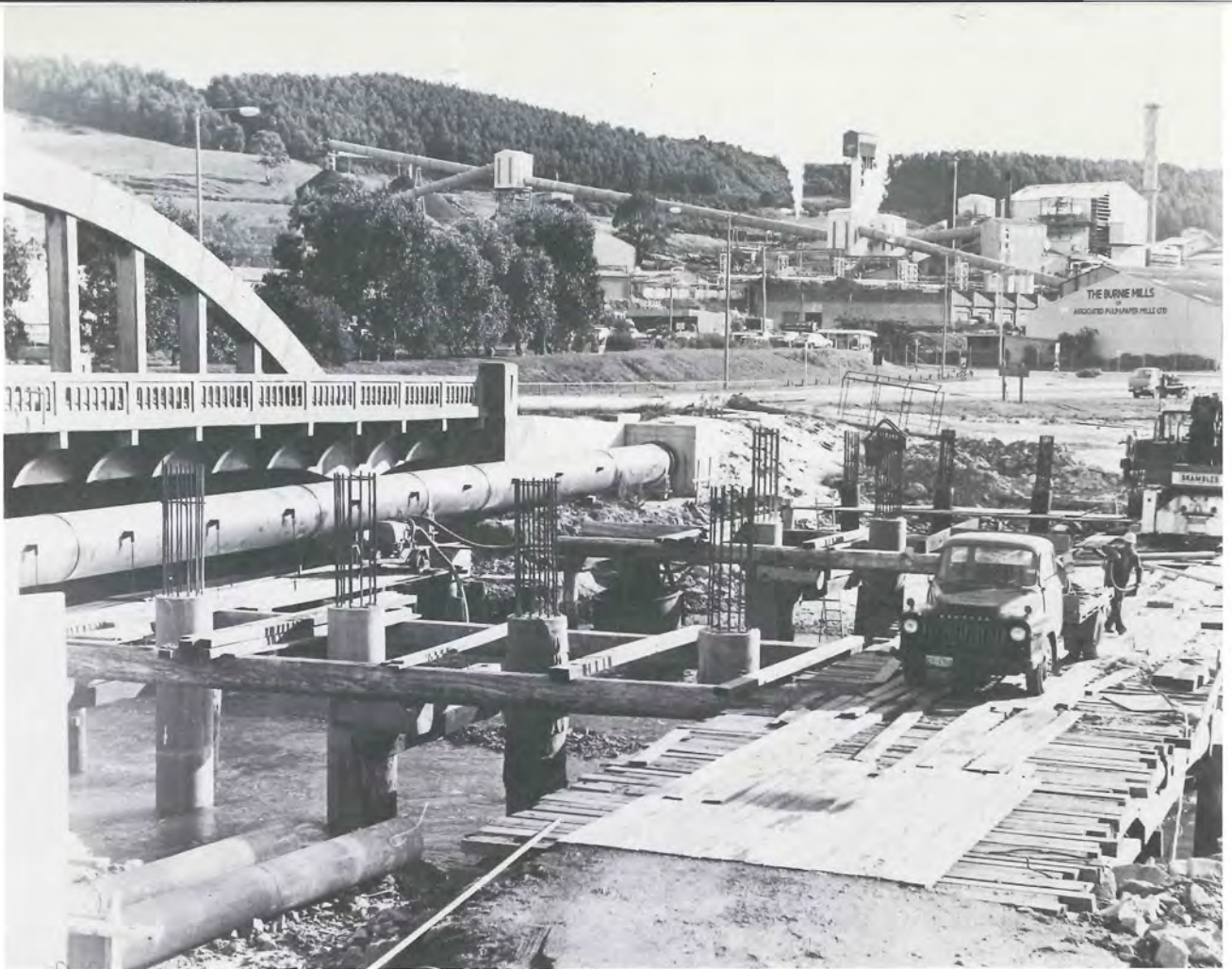
*Mackintosh River Bridge, Murchison Highway. This will
carry traffic over Lake Rosebery.*



Bowen Bridge Casting Yard at Wilkinson Point, showing stored pier caissons (upper left) and pre-cast segments for the bridge super-structure.

Bass Highway east of Devonport. Channelised at-grade junction of Port Sorell Main Road.





The new APPM pipeline bridge under construction on Bass Highway, Burnie.

Waratab Highway — Cam Cliff Section under re-construction.



CONSTRUCTION, MAINTENANCE AND OPERATIONS

MAJOR WORKS COMPLETED

The following bridgeworks were completed during the year:—

<i>Name</i>	<i>Road</i>	<i>Cost to 30.6.82</i>
		\$
Murchison River Bridge	Murchison Highway	878 580
Westbury Road Temporary Overpass	Westbury Road, Launceston	203 169
Pine Tree Rivulet Bridge	Lake Highway	171 000
King's Meadows Rivulet Culvert No. 1	Southern Outlet Road, Launceston	139 089
Doctors Creek Culvert	Lake Highway	133 350
Mt Pleasant Interchange Culvert	Southern Outlet Road, Launceston	123 502

MURCHISON RIVER BRIDGE — MURCHISON HIGHWAY

Construction of this four span, 100 metres long two lane bridge was started in February 1981 and the bridge was opened to traffic on 24 May 1982. The bridge is located on a road deviation and replaced the single lane bridge which will be inundated by the reservoir formed by Bastyan Dam of the H.E.C.'s Pieman River Power Development Scheme. The superstructure consists of steel girders acting compositely with a concrete deck, supported by piers of twin circular concrete columns founded on individual footings dowelled into rock, and by abutments of twin rectangular columns taken down to rock. One of the piers with a height of 27 metres above rock level is the highest pier ever constructed by the D.M.R. day labour force.

WESTBURY ROAD TEMPORARY OVERPASS — WESTBURY ROAD, LAUNCESTON

In order to construct the permanent overpass which is required to carry Westbury Road (Bass Highway) over the future Southern Outlet Road, it was necessary to construct first a temporary bridge adjacent to the site to carry the present traffic using Westbury Road. This structure consists of a superstructure comprising continuous steel beams with laminated timber deck topped with asphalt, supported on steel trestle piers and low concrete abutments.

CHASM CREEK BRIDGE — BASS HIGHWAY

The widening of Chasm Creek Bridge on the Bass Highway at Heybridge is the first bridgeworks put out to public tender in Tasmania on the National Route, in accordance with the newly introduced policy of the Federal Government. The widening required new abutments and wingwalls on both sides of the existing bridge, with a cast in situ reinforced concrete deck slab superstructure. The widening will accommodate the reconstruction of the Bass Highway east of Burnie to dual carriageways.

ARTHUR HIGHWAY

Sorell to Forcett

Reconstruction was completed on this section with the exception of final seal on a ½ km section.

Port Arthur By-Pass

Construction was substantially completed during the year except for the junction with the existing highway where a house removal obstructed works.

HOBART SOUTHERN OUTLET ROAD

A deceleration lane and improved turnoff was constructed at the entrance to the Lea Scout Camp prior to the recent Jamboree.

TASMAN HIGHWAY**Nunamara to Myrtle Park**

The worst corners on this section of road were realigned as well as the drains and other corners widened back from the road to increase traffic safety.

Tirzah Creek Bridge

Completion of the road approaches eliminated the width restriction at this site.

COLES BAY TOURIST ROAD

A 1.0 kilometre section on the northern end was strengthened and sealed using both mechanical and cement stabilisation of the pavement. This was an experimental section to gauge the best method of strengthening the whole road.

ESK MAIN ROAD — FINGAL

The section from Champ Street to Township Creek within the Fingal town boundary was reconstructed and sealed. Some property entrances have to be completed during 1982-83.

BASS HIGHWAY — LATROBE TO EAST DEVONPORT

This project, is now substantially completed. The bulk of the reconstruction work during 1981-82 was carried out between Winspear's Road, chainage 13 600 m and East Devonport chainage 16 520 m, a total of 2.92 km.

Incorporated in this section was the construction of a major junction at Port Sorell Main Road, involving reconstruction of 0.38 km of the Port Sorell Main Road, and construction of climbing lanes both from the east and the west to Port Sorell Main Road junction.

HUON HIGHWAY

The junction of Ranelagh Secondary Road was improved for safer turning movements and better traffic management.

BRIDPORT MAIN ROAD

Two sections of this road were strengthened and sealed, one 1.5 km in length between Golconda turnoff and Pipers River and the other 4.0 km in length over Volunteer Hill between Pipers River and the Dalrymple Main Road Junction.

MAJOR WORKS IN PROGRESS**CLYDE RIVER BRIDGE — LAKE HIGHWAY**

Progress was made in accordance with the program for completion in the summer 1983-84. Substructures were well advanced, two spans of prestressed concrete beams were erected and casting of the remaining beams was well advanced.

EMU RIVER BRIDGE

All substructure piling, together with the eastern abutment was completed in 1981-82. A beam casting yard was also set up in preparation for manufacture of prestressed beams. The programmed date for completion is now early 1983.

WIVENHOE RAIL UNDERPASS — BASS HIGHWAY

Work continued on the Wivenhoe Railway Underpass in 1981-82 and the abutments were completed. Approximately 1 350 m³ of concrete has now been placed in the structure. A pin crib wall 42 metres in length was constructed on the south-western side of the structure.

The Underpass will have a span of 4.9 metres and will be 62 metres long on the centreline. The 101 deckplanks and the two edge beams will be placed in July 1982, and the structure is expected to be completed by September 1982.

INGLIS RIVER BRIDGE — BRIDGE STREET, WYNYARD

Towards the end of the financial year, a start was made on the construction of the new bridge across the Inglis River at Wynyard; the new bridge carries two lanes of traffic and a footway, and has an overall length of 72 metres and an overall width of 9.8 metres. The superstructure consists of prestressed concrete beams acting compositely with the concrete deck slab over the three spans, and supported on solid concrete piers and abutments, all founded on concrete piles.

MOUNTAIN RIVER BRIDGE — RANELAGH SECONDARY ROAD

Construction of the bridge was well advanced, with all prestressed concrete beams erected and casting of the deck slabs in progress. The bridge and lengthening of a box culvert in the road approaches are scheduled for completion in October 1982.

MACKINTOSH RIVER BRIDGE — MURCHISON HIGHWAY

The bridge is located on the second road deviation which is necessitated by the future flooding of an existing bridge on the Murchison Highway by the reservoir formed by Bastyan Dam of the H.E.C.'s Pieman River Power Development Scheme, the other deviation incorporating the Murchison River Bridge.

The river pier of this bridge had been almost completed during 1981 to take advantage of the dry river bed caused by storage of water by the newly constructed Mackintosh Dam. Construction restarted on this bridge in May 1982 and completion is expected before the end of 1982. The bridge carries two lanes of traffic, and is of three spans with an overall length of 63 metres. The construction is of the same type as the new Murchison River Bridge.

WESTBURY ROAD OVERPASS — WESTBURY ROAD, LAUNCESTON

Following the diversion of road traffic over the temporary underpass, site work started on the permanent underpass in January 1982. Because of the density of the traffic, there is a need to keep the diversion period to a minimum. Accordingly, bridge gang strength on the bridge was increased to an economic maximum, and it is expected that the bridge will be completed and opened to traffic before Christmas 1982.

BRIDGES ON THE LONGFORD DEVIATION

All four bridges on the deviation have spill-through abutments which require grouted stonework protection against flood erosion. This work will be carried out after the bridges are opened to traffic —

(i) South Esk River Bridge

The bridge was completed early in 1982.

(ii) South Esk Flood Opening No. 1

At the end of the financial year, the deck slabs were being poured, and completion of the bridge was expected towards the end of 1982.

(iii) South Esk Flood Opening No. 2

At the end of the financial year, all the concrete planks were in place, and completion was expected in March 1983.

(iv) Back Creek Bridge

At the end of the financial year, the substructure construction was well advanced, and all the planks had been made. Completion is expected in April/May 1983.

HILTON ROAD OVERPASS — NORTHERN OUTLET ROAD, HOBART

This two span bridge is being constructed to carry traffic on Hilton Road over the Northern Outlet Road. The bridge is 48 metres overall length, and 11.9 metres overall width and provides for 2 lanes of traffic and a footway on each side of the roadway. Construction started on site in June 1982 and is expected to be completed in April 1983 just prior to the opening to traffic of the Northern Outlet Road through to Granton.

MT PLEASANT UNDERPASS — SOUTHERN OUTLET ROAD, LAUNCESTON

This two span underpass has an overall length of 35 metres and a varying overall width of approximately 27 metres. The structure carries the two diverted carriageways, and a tapering-south bound on ramp. The structure is expected to be completed towards the end of 1983.

BOWEN BRIDGE

Seventy per cent of the Bowen Bridge superstructure segments, match cast on three long line casting beds, were completed by the end of the year. All river cofferdam rings were cast and positioned in the river. Precasting of pier caisson caps continued. Superstructure segments were assembled by the balanced cantilever method of erection on four of the nine bridge piers. The remaining piers were at various stages of construction. Substantial progress was made in construction of the eastern and western road approaches. It is anticipated that the bridge and road approaches will be opened to traffic in the latter half of 1983.

LYELL HIGHWAY — NEW NORFOLK-GRETNA

Pavement strengthening and improvement to width and alignment was carried out from Lawitta to Hayes, including the rock cutting at Hayes to improve traffic safety.

TASMAN HIGHWAY**Triabunna northwards**

A further 4½ km of pavement was strengthened to the vicinity of Rocky Waterholes.

Horseshoe Bend, 6 km south of Swansea

Earthworks were commenced on the approaches to the new culvert on Thirty Acre Creek to provide an improved alignment and full 2 way road.

Scottsdale to Ringarooma Road

Work continued from West to Tullendeena towards Ringarooma. A further 1.7 kilometres from L77.2 to L78.9 was sealed and earthworks and gravelling are underway as far as L80.7 km.

BOYER SECONDARY ROAD

The junction with the Midland Highway was improved by the Brighton Municipal Council and 4 km of pavement was strengthened from Bridgewater towards Boyer.

HOBART NORTHERN OUTLET ROAD

Work continued on the construction of this new facility and the extension of Euston Street was completed providing for future grade separation at Abbotsfield Road. This highway is expected to be opened to traffic late in 1982-83.

ARTHUR HIGHWAY**Oakwood to Port Arthur**

The pavement was strengthened and the width improved with junction improvements at Stewarts Bay.

Dunalley to Eaglehawk Neck

Pavement shape correction and strengthening with asphalt was extended a further 2½ km to Murdunna.

MIDLAND HIGHWAY**Jericho By-Pass**

This work was substantially completed during the year, including the pavement, and sealing and line-marking of the road by contracts were then carried out. The by-pass was opened to traffic in January 1982.

Stonor Road to Oatlands

Work continued on this section during the year. Earthworks were substantially completed from Stonor Road to Lemon Hill in preparation for completion of the pavement by contract in 1982-83. A start was made with earthworks on the remainder of the section towards Oatlands.

BRUNY MAIN ROAD

Reconstruction was continued by the Bruny Municipal Council. Sealing was completed on 5.8 km from Alonnah to Adventure Bay turnoff.

HUON HIGHWAY**Geeveston to Franklin**

A section 2 km long was sealed north of Castle Forbes Bay and work continued to Braeside.

Franklin to Huonville

Work started on the section between Swamp Road and the D.M.R. depot near Huonville.

LAUNCESTON SOUTHERN OUTLET ROAD

Work has commenced on the permanent bridge structures at Westbury Road and the Mt Pleasant Interchange. Earthworks and Drainage are continuing between Shamrock Street and the Midland Highway junction at Strathroy.

ILLAWARRA MAIN ROAD — DEVIATION AT LONGFORD

Earthworks on the deviation are nearing completion and 50 per cent of the base course gravelling has been completed. In addition the Tannery Road intersection and the link road into Longford have been sealed.

MATHINNA SECONDARY ROAD

Reconstruction and bitumen sealing works have progressed to a point 16.7 km north of Fingal, with the exception of a short length of 400 metres near the South Esk River Bridge.

Earthworks have been completed for a further 3.0 km ahead of the bitumen seal and some base course gravelling has been completed over this section.

BASS HIGHWAY**Old Surrey Road to Chasm Creek**

Relocation of 1.2 km of railway track in 1981-82 has allowed the eastbound carriageway from Wivenhoe Rail Underpass to Round Hill and the westbound carriageway from Natone Road to Wivenhoe Rail Underpass to be constructed. Most of the excavation and drainage work on the section from Emu River to Chasm Creek has been completed and pavement work is continuing.

Flowerdale to Cassidy's Bog

Reconstruction of 8 km of the Bass Highway from Flowerdale to Cassidy's Bog commenced in late 1981. Three kilometres including a 1.5 km climbing lane, were completed to sealing stage by the end of the financial year.

LAKE HIGHWAY — DEVIATIONS AT GREAT LAKE

Work commenced on this project in 1982. All excavation has been completed on the approaches to Pine Tree Rivulet culvert and Doctor's Creek bridge.

A total of 13 550 m³ of borrow fill was also placed on the approaches to the above structures and drainage and pavement work commenced.

WARATAH HIGHWAY RECONSTRUCTION — SOMERSET TO WEST TAKONE JUNCTION

The remaining 2 km south of Yolla were sealed and a 0.25 km section of the main street on the northern end of Yolla was reconstructed to the new alignment and levels.

Earthworks and drainage commenced in February 1982 and some 33 000 m³ were excavated from the cliffs. Portion of this material was used for filling required on the river bank.

ZEEHAN/STRAHAN ROAD

Good progress was made on reconstruction of this road in 1981-82 with 6 km of earthworks and drainage completed within the year between the Professor Deviation and the Henty Deviation.

Some 60 per cent of the sub-base gravel requirements were also placed on this 6 km of road — which now provides a widened and improved all weather running surface.

ROAD MAINTENANCE

Mild climatic conditions have again enabled the Department to concentrate on maintaining the road system without resources being directed to emergency works.

BITUMINOUS SURFACING

Details of the bituminous works undertaken are shown in Annexure C.

BRIDGE MAINTENANCE

BRIDGEWATER BRIDGE

Slight cracking, which had become evident in the surfacing of the redecked liftspan, increased during the year to the extent that repairs were considered necessary. These required refastening of the steel deck planks and reinstatement of the asphaltic running surface.

Further progress on the renewal of the protective fendering in the navigation channel was made with the completion of pile driving, and all materials are on hand to enable the sheathing to be undertaken in the coming year.

A start was also made on the replacement of obsolete switchgear and deteriorated electrical wiring in the liftspan control systems. Upgrading of these components will be carried out progressively over a period of several years.

Liftspan openings during 1981-82 were —

Newsprint vessels	....	....	....	....	....	....	....	....	592
Ferry and charter	....	....	....	....	....	....	....	....	46
Other private	....	....	....	....	....	....	....	....	59
Test and maintenance	....	....	....	....	....	....	....	....	15
Total	....	....	....	....	....	....	....	....	712

JETTIES, WHARVES AND FERRIES

BRUNY FERRY BERTHS

Approximately \$16 000 was expended on general maintenance of berths and repairs to the Barnes Bay terminal. These repairs were necessary in order to keep the terminals operable.

NEW BERTHS AT KETTERING AND ROBERTS POINT

Towards the end of the financial year the contract for the construction of the 8.6 km access road from Bruny Main Road to the site of the Roberts Point ferry terminal was completed. The work was carried out satisfactorily within the scheduled time by the contractor. Tenders were called for the construction of the two new terminals at Kettering and Roberts Point, and a contract for an amount of \$2 567 669.84 was awarded in December 1981. Under the contract, Roberts Point terminal is to be completed in December 1982 and Kettering terminal in February 1983. Work started on site in January 1982, and was progressing in accordance with the approved program.

INVESTIGATIONS AND MATERIALS TESTING

Route feasibility and design investigations were carried out for the following projects:—

- Prospect By-Pass.
- Launceston Eastern By-Pass.
- Oatlands By-Pass, Midland Highway.
- West Beach Rail Relocation, Burnie.
- Don Hill to Ulverstone, Bass Highway.
- Deloraine By-Pass, Bass Highway.
- Shooters Hill to Puzzle Gate Creek and Apple Pip Deviation, Lyell Highway.
- Pub-with-no-Beer Corner, Lake Highway.

Investigations for foundations of nine bridge structures and for slope stability of seven sites were undertaken.

LANDSCAPING

The Department's nursery provided 43 500 plants for planting on road construction sites. The main planting projects were continuation of Ulverstone By-Pass, East Tamar Outlet, Hobart Eastern Outlet and Midland Highway. New planting was undertaken on Wynyard By-Pass.

CONSTRUCTION PLANT AND WORKSHOPS

GENERAL

The Plant Division, which incorporates the Workshops at Moonah, Launceston and Ulverstone, provides plant and workshop facilities for the Department's construction and maintenance activities on roads and bridges.

Although plant usage on many major items was down some 5 per cent compared to the previous year, the income from Plant Hire amounted to \$7 995 998, an increase of 2.6 per cent over the previous year.

The amount of hire paid directly to outside owners and contractors amounted to approximately \$6.28 million.

PLANT OPERATIONS

An amount of \$1.05 million was spent on the purchase of new equipment, mainly the replacement of light vehicles. No major items of heavy vehicles were replaced during the year.

TRAINING AND DRIVER TESTING

During the year 225 individuals including 43 from other Departments were tested and issued with D.M.R. driving permits. As well some 200 licence extension tests were arranged by the Operator Instructor.

One day Defensive Driving Seminars were held at Moonah, Launceston and Ulverstone with a total attendance of 86.

VEHICLE ACCIDENTS

The frequency of vehicle accidents increased during 1981-82 from 0.63 accidents per 150 000 km to 0.72 in the current year. Personal injury has been negligible and few accidents resulted in major damage.

FLASHING LIGHT TRAILER

The trailer has proved to be a most effective device used in traffic control during a lane closure. It was used in 72 lane closures during the year, on the Tasman Bridge and the Northern, Southern and Eastern Outlets.

APPRENTICES

Participation in the Hydro-Electric Commission's training scheme was again made available to first year metal trades apprentices from Moonah.

The number of apprentices currently undergoing training in the Department's workshops is sixty (60) made up as follows:—

[illegible]

DEPOTS AND WORKSHOPS

The Workshop Production Account recorded an annual turnover of \$5.3 million.

Major works carried out during the year, apart from the main function of plant repairs, consisted of steel fabrication for the Bruny Island Ferry terminal, steel falsework for bridges over the Murchison River and Clyde River, fabrication of fence panels for the Housing Department and the manufacture of three 2 tonne trailers.

Depot improvements included the provision of accommodation for foremen and sub-foremen at Moonah and the construction of a fireproof wall in the main workshop at Launceston Depot.

FINANCIAL STATEMENTS

The Plant Division operates with an April to March financial year. The Division trading account is the Road Construction Plant Suspense Account which must be kept as required by section 6 of the Roads and Jetties Act 1935.

The Road Construction Plant Suspense Account financial statements for the period are reported in Annexure D.

ADMINISTRATION

GENERAL

The continued implementation of the Government's staff reduction policy, taken together with the maintenance of real levels of funding in the State Highways Trust Fund, has meant that existing staff resources have been fully extended to meet the growing demands for services.

In this regard additional workload has been imposed related to the preparation for and implementation of the new policy requiring letting of some road and bridge works to contract.

The Department's Internal Audit Section has provided valuable assistance to management during the year in identifying administrative and accounting deficiencies within the Department and in recommending changes to rectify such deficiencies.

STAFF

At 30 June 1982 there were 381 Public Service Act positions and 37 Public Works Construction Act positions on the Department's establishment and the actual number of staff employed was 371 Public Service Act staff and 37 Public Works Construction Act staff.

The composition of this staff was —

<i>Public Service Act Staff</i>	
Administrative Officers, Accountants and Clerical Staff	113
Professional Engineers	78
Surveyors	16
Scientific Officers, Technical Officers, Engineering Assistants and Technicians	68
Draftsmen	52
Typists and other Keyboard Classifications	29
Other Classifications	15
TOTAL PUBLIC SERVICE ACT STAFF	371
<i>Public Works Construction Staff</i>	
Survey Assistants	22
Plan Printers	2
Inspectors	9
Other Classifications	4
TOTAL PUBLIC WORKS CONSTRUCTION ACT STAFF	37

The distribution of staff to the various locations of the Department was as follows:—

<i>Public Service Act Staff</i>							
Head Office, Murray Street, Hobart	....	....	....	....	....	....	204
South-East District Office, Derwent Park	....	....	....	....	....	....	21
North-East District Office, Launceston	....	....	....	....	....	....	37
North-West District Office, Ulverstone	....	....	....	....	....	....	35
Central Workshops and Stores, Moonah	....	....	....	....	....	....	41
Materials Laboratory, Derwent Park	....	....	....	....	....	....	25
Kirksway House, Battery Point	....	....	....	....	....	....	8
TOTAL	....	....	....	....	....	....	371
<i>Public Works Construction Act Staff</i>							
Head Office, Murray Street, Hobart	....	....	....	....	....	....	3
South-East District Office, Derwent Park	....	....	....	....	....	....	1
North-East District Office, Launceston	....	....	....	....	....	....	10
North-West District Office, Ulverstone	....	....	....	....	....	....	9
Central Workshops and Stores, Moonah	....	....	....	....	....	....	3
Materials Laboratory, Derwent Park	....	....	....	....	....	....	3
Kirksway House, Battery Point	....	....	....	....	....	....	8
TOTAL	....	....	....	....	....	....	37

STUDY COURSES AND STAFF DEVELOPMENT

At present two officers holding University Scholarships for the Engineering Faculty are assisted with living allowances and the cost of fees at the University of Tasmania.

Several officers are attending University part-time to study economics or allied subjects. Including those studying work-related subjects in other tertiary establishments there are a total of thirty-one persons receiving time off for study purposes.

Staff development courses continue to be held but are reduced to essential sessions only. In addition a formally defined induction program is conducted for young and new officers within the Department.

INDUSTRIAL

Wage rates continued to rise, mainly as a result of wage and conditions of employment packages. Increases in allowances, particularly travelling and camping were noticeable, also the introduction of a 38 hour week 9 day fortnight for award employees. The State Incremental Payment Scheme was also varied from 1 January 1982 by \$12 per week.

Departmental relationships with unions remained very good and only minimal time was lost due to industrial action.

As at 30 June 1982 the number of employees engaged in workshop and field operations were —

Workshops and depots	....	....	....	....	....	....	....	243
Road and bridge construction and maintenance	....	....	....	....	....	....	....	833
TOTAL	....	....	....	....	....	....	....	1 076

Retirements for the year totalled forty-six and a number of these served the D.M.R. for many years. Notable retirements were —

Retirements: Age or Voluntary —

- R. J. Taylor, 2nd Class Machinist — 40 years service.
- S. Salenieks, Labourer — 31 years service.
- V. G. Pettitt, Driver — 30 years service.
- T. W. McKenna, Driver — 30 years service.

- V. Stocko, 2nd Class Machinist — 31 years service.
 V. D. Smith, Field Clerical Assistant — 27 years service.
 W. J. Tonks, Painter — 27 years service.
 R. O. Saunders, Foreman — 28 years service.
 K. J. Lyna, L/H Carpenter — 25 years service.

Retirements Due to Ill Health —

- B. Whelan, Plant Operator — 31 years service.
 J. Grenda, Labourer — 32 years service.
 D. A. Rollins, Foreman — 35 years service.
 R. H. Hingston, Roller Driver — 25 years service.
 L. W. Purton, Traffic Controller — 26 years service.
 D. J. Sheehan, Labourer — 25 years service.

WORKERS' COMPENSATION

From 1 October 1981 the Tasmanian Government Insurance Office provided a new claim advisory service for all workers' compensation matters. The cost of workers' compensation claims continued to rise with one common law claim being settled for \$120 000 in addition to the normal workers' compensation payments under the Act.

The following is a summary of payments made by the Department under the Workers' Compensation Act:—

	\$
Weekly payments	217 868
Medical expenses	91 077
Lump sum settlements	31 846
	\$340 791

INDUSTRIAL SAFETY

The 'Accident Prevention Program' was continued throughout the Districts and Depots in the Department over the 1981-82 period.

Two main courses were included in the Department's safety training program for the period —

- (a) First Aid.
 (b) Shot Firers.

In reference to the 'First Aid Courses' which were conducted in the three Districts, excellent results were achieved with 2 Labels, 6 Medallions, 4 Vouchers, 63 Standard Certificates being gained by employees attending.

The Shot Firers' Course was also continued with eighteen employees gaining their permits from the Mines Department for Safety and Electrical Firing.

The lost time accident rate for the Department again showed a slight downward trend and two main bridge gangs in the North-East District produced excellent records of job safety and so gained the 'National Safety Council of Australia, Safety Plaque'.

REHABILITATION

The Department's internal Rehabilitation Committee was again active in continuing its tasks of assessment and rehabilitation of employees who because of injury, disease and age could no longer carry out their duties in their normal daily jobs.

The number of cases processed by the Committee increased over 1980-81, and of the 25 cases which arose for appraisal and assessment, 9 of these were suitably re-employed, 10 retired or left the Department and the remaining 6 are still under investigation.

The Committee continues to experience difficulty in rehabilitation of many cases because of the restricted avenues of employment available for such employees.

PROPERTY ACQUISITIONS

During 1981–82 a total of 123 new acquisitions were commenced and at the end of the financial year 311 acquisitions were in progress, 83 of which were subject to compulsory process compared with 67 at the end of the previous year. Expenditure on property acquisitions for the year was \$2 500 690 compared with \$1 873 655 for the preceding year. Included in this total was an amount of \$1 027 568 for National Highway projects.

The major areas of expenditure included the purchase of properties affected by the construction of the Launceston Southern Outlet Road, Bathurst Street/Wellington Street Couplet, Midland Highway, Bowen Bridge Approaches, Ulverstone By-Pass and the Burnie Expressway. The reconstruction of the Arthur, Channel, Tasman and Bass Highways resulted in many minor property acquisitions.

As a result of hardship applications by owners, in the Launceston and Burnie areas, a number of properties have been purchased in advance of requirements. Where possible arrangements have been made for these properties to be let until required for roadworks.

CONTRACTS

The following contracts were entered into during 1981–82:—

<i>Contract No.</i>	<i>Description</i>	<i>Contract Price</i>
<i>Commonwealth Funded Projects</i>		\$
NH/R 002	Installation of Road (Guide) Signs, Midland Highway, Bridgewater to Otlands	20 274-00
NH/R 003	Midland Highway — Supply and Installation of Road (Guide) Signs, Otlands to Launceston	43 800-00
NH/R 005	Midland Highway Bagdad to North Bagdad Supply and Lay Asphalt	59 980-78
NH/R 006	Midland Highway Bagdad to North Bagdad Pavement Stabilisation and Associated Works	47 271-26
NH/R 007	Midland Highway Sealing of Jericho By-Pass and Intersecting Minor Roads	99 979-00
NH/R 008	Midland Highway — Linemarking of Jericho By-Pass and Intersecting Minor Roads	7 533-17
NH/M 009	Midland Highway — Bagdad Supply and Lay Asphalt Overlay	74 712-50
NH/R 012	Brooker Highway Black Snake Road Interchange — Supply and Lay Asphalt	85 324-30
B/NW 370	Chasm Creek Bridge Bass Highway East of Burnie	147 542-00
R/SE 378	Supply and Lay Asphalt on Bowen Bridge Western Approach Road Sections 1 and 2	36 005-50
<i>State Government Funded Projects</i>		
B/SE 366	Construction of Bruny Island Ferry Terminals	2 567 669-84
R/SE 371	Provision of Tow Truck Service on Tasman Bridge for Period 16.10.81 to 13.10.82	Monthly 775-00 Weekly 180-00 Hourly 8-00
B/NW 372	Mackintosh River Bridge, Murchison Highway near Tullah — Supply and Protective Treatment of Structural Steelwork	52 772-00
R/NW 374	Bass Highway — Supply and Lay Asphalt Pavement Overlay on Wynyard By-Pass	79 713-00
R/SE 375	Grass Tree Hill Secondary Road — Supply and Lay Asphalt Pavement Overlay	54 853-00
R/SE 376	Arthur Highway at Murdunna — Supply and Lay Asphalt Overlay	203 039-52
R/SE 377	Brooker Highway — Elwick Road to Rosetta Supply and Lay Asphalt Overlay on North-bound Lanes	82 855-61
R/SE 379	Boyer Secondary Road Bridgewater to Dromedary — Supply and Lay Asphalt	140 005-41
	Bridport Main Road Pavement Strengthening (Supply of up to 30 000 cubic metres of gravel)	4-65 Cubic Metre

AGREEMENTS

Contracts below \$10 000 in value are usually the subject of a simplified form of contract termed 'agreements'. The following agreements were entered into during 1981-82:—

					<i>Bridges</i>	<i>Sealing</i>	<i>Gravel</i>	<i>Others</i>	<i>Total</i>
North-West District	....	....	....		....	4	9	5	18
North-East District	....	....	....		....	8	28	18	54
South-East District	....	....	....		....	25	13	6	44
Head Office	....	....	....		11	1	7	7	26
TOTALS	....	....	....		11	38	57	36	142

STORES

The construction and plant stores requirements of the Department are managed through a decentralised stores system, with a principal store at the main workshop complex at Moonah and major branch stores at the District Offices in Launceston and Ulverstone.

The total value of stores issued during the year from the three centres was approximately \$1.5 million and the value of stores holdings at 30 June 1982 was \$836 525.

Contract orders placed direct by the Department's Stores Staff totalled 7 850, amounting to some thousands of individual items.

The transfer of Plant Store items to the A.D.P. stores system is expected to be completed by December 1982.

ACKNOWLEDGEMENT

I express my appreciation to the staff and employees of the Department for the manner in which they have responded to all demands placed upon them during the year.

On behalf of the Department I extend thanks to all the State and Commonwealth Departments and Local Government bodies which have co-operated with or provided assistance to the Department during the year.

G. E. C. McKERCHER, Director of Main Roads.

ANNEXURE A
LOAN FUND EXPENDITURE 1981-82

1980-81 \$		1981-82 \$
	<i>Roads and Bridges —</i>	
135 000	Bridge renewals generally ....	....
804 479	Hobart Eastern Outlet Road ....	....
749 316	Access Road to Roberts Point Ferry Terminal	850 000
500 000	Tasman Highway, Scottsdale to Ringarooma Turnoff	500 000
500 000	Huon Highway, Huonville to Geeveston	500 000
338 646	Strahan-Zeehan Road	589 000
585 000	Illawarra Main Road, Deviation at Longford ....	....
7 559	Access Road to Kingston Fire Station ....	....
450 000	East Tamar Outlet ....	....
210 000	Refund to Consolidated Revenue for Administration	111 000
\$4 280 000	TOTAL (Roads and Bridges)	\$2 550 000
	<i>Other Works —</i>	
187 243	Launceston Flood Protection	179 443
124 624	Jetties and Facilities for Fishermen	99 988
....	Bruny Ferry Terminals — Construction	987 929
\$311 867	TOTAL (Other Works)	\$1 267 360
\$4 591 867	TOTAL (All Works)	\$3 817 360

ANNEXURE B
FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES

1980-81 \$		1981-82 \$
	<i>Direct Grants—</i>	
674 649	Arterial Roads — Construction	612 694
3 683 743	Local Roads — Construction	4 113 244
1 802 223	Maintenance	2 121 697
72 887	Minor Improvements for Traffic Engineering and Road Safety ....	....
\$6 233 502	TOTAL	\$6 847 635
	<i>Work on Council Roads Financed and Carried out by D.M.R.—</i>	
1 591 572	Repair and Renewal of Bridges	1 846 550
250 214	Roadworks	362 835
\$8 075 288	TOTAL	\$9 057 020

ANNEXURE C
BITUMINOUS SURFACING COMPLETED 1981-82 (km)

	Hot Bitumen Sprayed Seal					
Road	Prime and Seal	Primer Seal	Winter Seal	Flush Reseal	Asphalt	Total
South-East District —						
Arthur Highway		4.45	....	7.41	2.60	14.46
Brooker Highway					1.07	1.07
East Derwent Highway				8.27	....	8.27
Eastern Outlet				0.65	0.65	1.30
Huon Highway	1.86	0.56	....	....	....	2.42
Lyell Highway		2.20	....	5.19	0.40	7.79
Midland Highway		8.46	....	10.80	3.55	22.81
Northern Outlet Road		3.02	....	0.27	2.58	5.87
Southern Outlet				5.94	....	5.94
Tasman Highway		4.50	....	4.64	0.97	10.11
Colebrook Main Road				9.73	....	9.73
Fenton Main Road		1.00	....	....	....	1.00
Arve Secondary Road				4.10	....	4.10
Boyer Secondary Road		0.91	....	....	3.85	4.76
Four Foot Secondary Road				3.38	....	3.38
Grass Tree Hill Secondary Road			1.10	....	1.10	2.20
Lake Dobson Tourist Road				0.91	....	0.91
North-East District						
Bass Highway				2.82	0.85	3.67
East Tamar Highway			1.13	....	....	1.13
Midland Highway				10.77	1.29	12.06
Tasman Highway			2.52	5.92	7.02	15.46
West Tamar Highway				0.60	1.68	2.28
Bracknell Main Road				14.48	....	14.48
Bridport Main Road			5.36	....	....	5.36
Esk Main Road				4.05	....	4.05
Frankford Main Road				1.61	....	1.61
Lilydale Main Road			0.69	....	....	0.69
Poatina Main Road				11.95	4.81	16.76
Mathinna Secondary Road	7.10	....	....	....	....	7.10
Pipers River Secondary Road				7.33	....	7.33
North-West District						
Bass Highway	4.25	7.54	....	....	9.47	21.26
Lake Highway	0.31	....	....	....	....	0.31
Murchison Highway	2.58	....	....	19.83	....	22.41
Waratah Highway	3.37	....	....	9.33	....	12.70
Castra Main Road				7.13	....	7.13
King Island Main Road				5.36	....	5.36
Mole Creek Main Road				8.25	....	8.25
Sheffield Main Road				5.97	....	5.97
Wilmot Main Road				2.48	....	2.48
Mt Hicks Secondary Road				5.77	....	5.77
TOTAL	19.47	32.64	10.80	184.94	41.89	289.74

In addition to the above the following works were also carried out by the Department on Classified and Unclassified Roads. In some cases because of various pavement widths, junction areas, etc., quantities are shown rather than lengths:—

Bathurst St/Wellington St Couplet — 818 Tonnes Asphalt.

Bowen Bridge Western Road Approaches — 808 Tonnes Asphalt.

Bowen Bridge Western Road Approaches — 15 563 m² Primer Seal.

Bowen Bridge Western Road Approaches — 1 131 m² Prime and Seal.

Bowen Bridge Western Road Approaches — 309 m² Flush Reseal.

Brooker Highway — Risdon Road Junction — 80 Tonnes Asphalt.

East Tamar Outlet/Mowbray Connector — 2 152 Tonnes Asphalt.

Lyell Highway Derwent River and Nive River Bridge Approaches — 403 Tonnes Asphalt.

Midland Highway Jordan River Bridge Approaches — 49 Tonnes Asphalt.
 Southern Outlet Road Entrance to Lea Camp — 66 Tonnes Asphalt.
 Forth Main Road — 100 Tonnes Asphalt.
 Illawarra Main Road — 10 203 m² Winter Seal.
 Ranelagh Secondary Road Junction — 124 Tonnes Asphalt.
 Station Road — 41 Tonnes Asphalt.
 Emily and Main Sts, Bridport — 1.78 kms Flush Reseal.
 Coles Bay Subsidised Road — 1.05 kms Winter Seal.
 Maydena Subsidised Road — 5.15 kms Flush Reseal.
 Pieman River Power Development (for H.E.C.) — 11.56 kms Prime and Double Seal.

ANNEXURE D
ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1981-82
INCOME AND EXPENDITURE STATEMENT

Period Ending 21.3.81 \$		Period Ending 20.3.82 \$
	<i>Income —</i>	
	Earnings —	
7 798 457	Plant Hire	7 995 998
5 292 454	Workshop Charges	5 300 650
147 491	Other Income	134 104
104 907	Net Profit on Sale of Plant and Stores and Stocktaking Adjustments	86 678
<u>\$13 343 309</u>	TOTAL	<u>\$13 517 430</u>
	<i>Expenditure —</i>	
5 945 718	Plant Operation and Maintenance	5 757 835
5 122 396	Workshop Operations	5 115 810
1 003 071	Plant Depot Administration and Maintenance	982 400
1 279 571	Provision for Depreciation of Plant, Equipment and Buildings	1 177 339
7 873	Net Loss on Sale and Write-off of Plant Stores and Stocktaking Adjustments	1 356
....	Provision for Insurances	15 000
<u>13 358 629</u>		<u>13 049 740</u>
15 320Cr	Excess of Income over Expenditure for Period	467 690
<u>\$13 343 309</u>	TOTAL	<u>\$13 517 430</u>

ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1981-82

Balance Sheet as at 20 March 1982

1981 \$		1982 \$
NATURE AND SOURCE OF FUNDS USED —		
<i>Funds provided by State Treasurer —</i>		
Valuation of Plant and Equipment held at 30 June 1945 and Stock on Hand held at 30 June		
194 607	1946	194 607
3 140 730	Loan Funds	3 140 730
6 769	Commonwealth Grant	6 769
326 897	State Highways Trust Fund	326 897
2 506 537	General Reserve for Increased Cost of Plant Replacement	2 569 279
1 101 416	Accumulation Account	1 506 364
<i>Current Liabilities —</i>		
96 515	Sundry Creditors (Store)	88 693
387 249	Accrued Expenses	473 543
<i>Provisions —</i>		
10 378	Motor Vehicle Insurance	2 837
2 194	Plant Accident Insurance	4 103
<u>\$7 773 292</u>		<u>\$8 313 822</u>
THESE FUNDS ARE REPRESENTED BY—		
<i>Current Assets —</i>		
229 782	Cash at Treasury	333 822
374 137	Stock on Hand	371 543
46 111	Work in Progress — Deferred Charges	70 591
416 280	Accrued Charges — Plant Hire	1 122 320
85 775	Stores Issues	97 857
428 523	Workshops	473 429
4 572	Apprentice Tool Kits	1 875
<u>1 585 180</u>		<u>2 471 437</u>
<i>Fixed Assets—</i>		
14 557 948	Land, Buildings, Plant and Equipment at cost	15 056 398
(8 369 836)	Less Provision for Depreciation	(9 214 013)
<u>\$7 773 292</u>		<u>\$8 313 822</u>

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

1981 \$		1982 \$
<i>Source of Funds —</i>		
15 320 Cr	Profit from Operations	467 689
1 279 571	Add Non-Cash Item Depreciation	1 177 338
<u>1 264 251</u>		<u>1 645 027</u>
104 908	Less Profit on Sale of Plant Less Costs	86 638
<u>1 159 343</u>		<u>1 558 389</u>
.....	Increase in Plant Accident Insurance Provision	1 909
1 362	Increase in Motor Vehicle Insurance Provision .....	.....
296 411	Proceeds from Sale of Plant	322 870
<u>\$1 457 116</u>		<u>\$1 883 168</u>
<i>Application of Funds —</i>		
391 631	Increase in Working Capital	807 785
2 316	Decrease in Plant Accident Insurance Provision .....	.....
.....	Decrease in Motor Vehicle Insurance Provision	7 540
35 740	Improvements to Depots	11 585
171 425	Purchase of New Plant	73 619
817 389	Purchase of Replacement Plant	976 124
38 615	Purchase of Workshop Equipment and Tools	6 515
<u>\$1 457 116</u>		<u>\$1 883 168</u>